

**CLAIMS:**

1. A radar system including a head containing a radar transmitter and receiver and closely associated with a radar antenna wherein the head also includes a signal processing unit for processing the received radar signals and for combining these with video from other sources, which signal processing unit can simultaneously output video data in more than one digital format for use by at least one digitally driven display unit.  
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2. A radar system as claimed in claim 1 wherein the signal processing unit can simultaneously output video data for at least two differing processed radar signals.
- 10 3. A radar system as claimed in claim 1 wherein the signal processing unit can output at least a raw radar video signal and a processed radar signal.
4. A radar system as claimed in claim 1 wherein the signal processing unit can simultaneously output radar video signals for differing radar ranges.
- 15 5. A radar system as claimed in claim 1 wherein the signal processing unit is controllable by digital input signals.
6. A radar system as claimed in claim 1 wherein the signal processing unit can receive control signals for the radar receiver and transmitter.
7. A radar system as claimed in claim 1 wherein the signal processing unit can receive digital signal inputs which can be added to the video output during processing.
- 20 8. A radar system as claimed in claim 7 wherein a north heading signal is combined with the radar signal to allow synchrony with other video feeds.
9. A radar system as claimed in claim 1 wherein the signal processing unit may output signals representative additional video feeds.
- 25 10. A radar system as claimed in claim 1 wherein all signal processing is carried out digitally.
11. A radar system as claimed in claim 1 wherein the radar transmitter is controllable by digital signals from the signal processing unit.

- 9 -

12. A radar system as claimed in claim 1 wherein the digital signals are to a standard specification.
13. A radar system as claimed in claim 1 wherein the digital signals are USB, Firewire, Bluetooth or Ethernet protocol.
- 5 14. A radar system as claimed in claim 1 wherein the output feed may be utilised by more than a single display unit.
15. A radar system as claimed in claim 1 wherein the digital signals are distributed wirelessly.
16. A digital display for a system as claimed in claim 1 wherein the display may select 10 one or more video signals from those provided by the system.
17. A digital display for a system as claimed in claim 1 wherein the display has inputs allowing remote control of the radar transmitter, receiver or signal processing.
18. A method of producing a radar signal for a remote display consisting in receiving at 15 least one video radar signal at a radar head, receiving at least a video signal from a map or chart overlay at said radar head, receiving a signal capable of orienting the radar signal against the map signal at the radar head, and producing a digital video output consisting of at least two video signals wherein the signals may be displayed on at least one video display separately or combined.
19. A method of producing a radar signal for a remote display wherein the digital video 20 output includes a raw radar output, a processed radar output, a GPS map output and at least one heading signal.
20. A method of producing a radar signal for a remote display wherein the heading signal is a north heading signal.